AMENDMENTS TO THE CLAIMS

1. (Currently amended) An electrode for a fuel cell comprising a porous electron-conductive material, ~~carrying~~ a catalyst, and a proton-conductive substance,

wherein the pores of the porous electron-conductive material have an average diameter of 1 nm to 100 nm;

the catalyst is carried in the pores of the porous electron-conductive material;

~~wherein a~~ the proton-conductive substance is arranged ~~on a surface, including surfaces of pores, of the porous electron-conductive material or~~ in the vicinity of the ~~surface~~ catalyst; and

the proton-conductive substance is ~~obtained by carrying out coupling or polymerization~~ comprised of a proton-conductive substance precursor, a proton-conductive monomer or an equivalent thereto, ~~on the surface or in the vicinity~~ or polymers thereof.

2. (Currently amended) The electrode for a fuel cell according to Claim 1, wherein the catalyst is a noble metal catalyst.

3-15. (Canceled)

16. (Currently amended) A method for producing an electrode for a fuel cell, comprising the steps of:

(a) causing a catalyst to be carried [[on]] in the pores of a porous electron-conductive material, wherein the pores of the porous electron conductive material have an average diameter of 1 nm to 100 nm;

(b) forming a proton-conductive substance ~~on a surface, including surfaces of pores,~~ in the pores of the porous electron-conductive material ~~or in the vicinity thereof~~; and

(c) transforming the porous electron-conductive material into an assembly,

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wherein the steps can be changeable in the order thereof, thereby forming the proton-conductive substance in the vicinity of the catalyst, which is located on the surfaces of the pores of the porous electron-conductive material.

17. (Currently amended) A method for producing an electrode for a fuel cell, comprising the steps of:

(a) causing a catalyst to be carried [[on]] in the pores of a porous electron-conductive material, wherein the pores of the porous electron conductive material have an average diameter of 1 nm to 100 nm; thereafter,

(b) forming a proton-conductive substance ~~on a surface, including surfaces of pores,~~ in the pores of the porous electron-conductive material ~~or in the vicinity thereof~~; and then

(c) transforming the ~~obtained~~ porous electron-conductive material into an assembly, thereby forming the proton-conductive substance in the vicinity of the catalyst, which is located on the surfaces of the pores of the porous electron-conductive material.

18-38. (Canceled)

39. (Currently amended) The electrode for a fuel cell according to Claim 1, wherein the catalyst is Pt or Pt-Ru.

40. (Currently amended) The electrode for a fuel cell according to Claim 1, wherein the porous electron-conductive material is a carbon-based porous electron-conductive material.

41. (Currently amended) The electrode for a fuel cell according to Claim 1, wherein the carbon-based porous electron-conductive material is selected from the group consisting of carbon black, acetylene black, graphite, carbon fiber, carbon nanotube, fullerene, activated carbon, and glass carbon.

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42. (Canceled)

43. (Currently amended) The electrode for a fuel cell according to Claim 1, wherein the proton-conductive substance is not caused to flow out by a cell power generation operation from the surface of the porous electron-conductive material or in the vicinity thereof.

44. (Currently amended) The electrode for a fuel cell according to Claim 1, wherein one end of the proton-conductive substance is bound to the surface of the porous electron-conductive material through a chemical bond.

45. (Currently amended) The electrode for a fuel cell according to Claim 1, wherein the proton-conductive substance has a sulfonic group ($-SO_3H$), a phosphoric group or a carboxyl group.

46. (Currently amended) The electrode for a fuel cell according to Claim 1, wherein the proton-conductive substance is a proton-conductive polymer having a sulfonic group ($-SO_3H$), a phosphoric group or a carboxyl group.

47. (Currently amended) The electrode for a fuel cell according to Claim 1, wherein the proton-conductive substance has a hydrophobic site, and the substance is adsorbed in a hydrophobic manner to the surface of the porous electron-conductive material via the hydrophobic site.

48. (Currently amended) The electrode for a fuel cell according to Claim 1, wherein the proton-conductive substance is a proton-conductive polymer, the polymer having a hydrophobic site and the polymer being adsorbed in a hydrophobic manner to the surface of the porous electron-conductive material via the hydrophobic site.

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49. (Currently amended) A fuel cell having an electrode for a fuel cell according to Claim 1.

50. (Currently amended) A solid polymer fuel cell having an electrode for a fuel cell according to Claim 1.

51. (Currently amended) A direct methanol solid polymer fuel cell having an electrode for a fuel cell according to Claim 1.

52. (Currently amended) A method for producing an electrode for a fuel cell, comprising the steps of:

(a) causing a catalyst to be carried [[on]] in the pores of a porous electron-conductive material, wherein the pores of the porous electron conductive material have an average diameter of 1 nm to 100 nm; thereafter,

(b) transforming the ~~obtained~~ porous electron-conductive material into an assembly; and then

(c) forming a proton-conductive substance ~~on a surface, including surfaces of pores,~~ in the pores of the ~~obtained~~ porous electron-conductive material ~~or in the vicinity thereof,~~ thereby forming the proton-conductive substance in the vicinity of the catalyst, which is located on the surfaces of the pores of the porous electron-conductive material.

53. (Currently amended) A method for producing an electrode for a fuel cell, comprising the steps of:

(a) forming a proton-conductive substance ~~on a surface, including surfaces of pores,~~ in the pores of a porous electron-conductive material ~~or in the vicinity thereof~~, wherein the pores of the porous electron conductive material have an average diameter of 1 nm to 100 nm; thereafter,

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(b) causing a catalyst to be carried [[on]] in the pores of the ~~obtained~~ porous electron-conductive material; and then

(c) transforming the ~~obtained~~ porous electron-conductive material into an assembly, thereby forming the proton-conductive substance in the vicinity of the catalyst, which is located on the surfaces of the pores of the porous electron-conductive material.

54. (Currently amended) A method for producing an electrode for a fuel cell, comprising the steps of:

(a) forming a proton-conductive substance ~~on a surface, including surfaces of pores,~~ in the pores of a porous electron-conductive material ~~or in the vicinity thereof~~, wherein the pores of the porous electron conductive material have an average diameter of 1 nm to 100 nm; thereafter,

(b) transforming the ~~obtained~~ porous electron-conductive material into an assembly; and then

(c) causing a catalyst to be carried [[on]] in the pores of the ~~obtained~~ porous electron-conductive material, thereby forming the proton-conductive substance in the vicinity of the catalyst, which is located on the surfaces of the pores of the porous electron-conductive material.

55. (Currently amended) A method for producing an electrode for a fuel cell, comprising the steps of:

(a) transforming a porous electron-conductive material, wherein the pores of the porous electron conductive material have an average diameter of 1 nm to 100 nm, into an assembly; thereafter,

(b) causing a catalyst to be carried [[on]] in the pores of the porous electron-conductive material, which is a part of the assembly; and then

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(c) forming a proton-conductive substance ~~on a surface, including surfaces of pores,~~ in the pores of the porous electron-conductive material ~~or in the vicinity thereof~~, thereby forming the proton-conductive substance in the vicinity of the catalyst, which is located on the surfaces of the pores of the porous electron-conductive material.

56. (Currently amended) A method for producing an electrode for a fuel cell, comprising the steps of:

(a) transforming a porous electron-conductive material, wherein the pores of the porous electron conductive material have an average diameter of 1 nm to 100 nm, into an assembly; thereafter,

(b) forming a proton-conductive substance ~~on a surface, including surfaces of pores,~~ in the pores of the ~~obtained~~ porous electron-conductive material, which is a part of the assembly~~, or in the vicinity thereof~~; and then

(c) causing a catalyst to be carried [[on]] in the pores of the porous electron-conductive material, thereby forming the proton-conductive substance in the vicinity of the catalyst, which is located on the surfaces of the pores of the porous electron-conductive material.

57. (Currently amended) The method according to Claim 16, wherein the step [[b)]] (b) has a modification step of modifying the surface of the porous electron-conductive material.

58. (Previously presented) The method according to Claim 57, wherein the modification step is inserted before the proton-conductive substance is disposed on the surface, including surfaces of pores, of the porous electron-conductive material or in the vicinity thereof.

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59. (Previously presented) The method according to Claim 16, wherein the step of forming a proton-conductive substance is a step in which a methylol group is introduced onto the porous electron-conductive material and the methylol group is reacted with a proton-conductive substance precursor, to form the proton-conductive substance.

60. (Previously presented) The method according to Claim 16, wherein the catalyst is a noble metal catalyst.

61. (Previously presented) The method according to Claim 16, wherein the catalyst is Pt or Pt-Ru.

62. (Previously presented) The method according to Claim 16, wherein the porous electron-conductive material is a carbon-based porous electron-conductive material.

63. (Previously presented) The method according to Claim 62, wherein the carbon-based porous electron-conductive material is selected from the group consisting of carbon black, acetylene black, graphite, carbon fiber, carbon nanotube, fullerene, activated carbon, and glass carbon.

64. (Canceled)

65. (Previously presented) The method according to Claim 16, wherein the proton-conductive substance is not caused to flow out by a cell power generation operation from the surface of the porous electron-conductive material or in the vicinity thereof, especially from inside the pores.

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66. (Previously presented) The method according to Claim 16, wherein one end of the proton-conductive substance is bound to the surface of the porous electron-conductive material through a chemical bond.

67. (Previously presented) The method according to Claim 16, wherein the proton-conductive substance has a sulfonic group ($-SO_3H$), a phosphoric group or a carboxyl group.

68. (Previously presented) The method according to Claim 16, wherein the proton-conductive substance is a proton-conductive polymer having a sulfonic group ($-SO_3H$), a phosphoric group or a carboxyl group.

69. (Previously presented) The method according to Claim 16, wherein the proton-conductive substance has a hydrophobic site, and the substance is adsorbed in a hydrophobic manner to the surface of the porous electron-conductive material via the hydrophobic site.

70. (Previously presented) The method according to Claim 16, wherein the proton-conductive substance is a proton-conductive polymer, the polymer having a hydrophobic site and the polymer being adsorbed in a hydrophobic manner to the surface of the porous electron-conductive material via the hydrophobic site.

71. (Currently amended) A method for producing a fuel cell, comprising the steps of:

using electrodes for a fuel cell obtained with a method according to Claim 16 as a cathode and/or an anode; and

arranging the cathode and/or the anode so as to sandwich an electrolyte therebetween.

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72. (Currently amended) The method according to Claim 16, wherein the assembly is a catalyst layer formed on one or both of the electrodes for a fuel cell.

73. (New) A method for producing an electrode for a fuel cell, comprising the steps of:

(a) causing a catalyst to be carried in the pores of a porous electron-conductive material;

(b) binding a proton-conductive substance in the pores of the porous electron-conductive material; and

(c) transforming the porous electron-conductive material into an assembly,

wherein the steps can be changeable in the order thereof,

thereby forming the proton-conductive substance in the vicinity of the catalyst, which is located on the surfaces of the pores of the porous electron-conductive material.

74. (New) An electrode for a fuel cell comprising a porous electron-conductive material, a catalyst and a proton-conductive substance,

wherein the catalyst is carried in the pores of the porous electron-conductive material,

the proton-conductive substance is comprised of a proton-conductive substance precursor, a proton-conductive monomer or an equivalent thereto, or polymers thereof, and

the proton-conductive substance is bound to the porous electron-conductive material in the vicinity of the catalyst.

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